

1     What is claimed is:

2     1.    An umbrella frame comprising:

3           a pole member having a longitudinal axis, a bottom end and  
4     a top end;

5           a main hub member movably secured about said pole member  
6     and capable of sliding between said bottom end and said top end  
7     of said pole member, said main hub member also capable of  
8     rotating about said longitudinal axis of said pole member,

9           a secondary hub member hangably secured to said pole member  
10    near said top end of said pole member, said secondary hub member  
11    capable of rotating about said longitudinal axis of said pole  
12    member,

13          a plurality of rib members pivotally secured to said  
14    secondary hub member,

15          a plurality of strut members each having an inner end and  
16    an outer end, said inner ends being pivotally secured to said  
17    main hub member, said outer end of each of said strut members  
18    being pivotally secured to a respective one of said rib members,  
19    and

20          means for maintaining said main hub member in a vertical  
21    position along said pole member while permitting rotation of  
22    said main hub member about said longitudinal axis of said pole  
23    member.

24          2.    The umbrella frame of claim 1 wherein said means for  
25    maintaining said main hub member in said vertical position

1 comprise a cam cleat member.

2 3. The umbrella frame of claim 1 wherein said means for  
3 maintaining said main hub member in said vertical position  
4 comprise a stabilizer arm having a first end and a second end,  
5 said first end being secured to one of said strut members and  
6 said second end being operably coupled to said pole member.

7 4. The umbrella frame of claim 1 wherein said means for  
8 maintaining said main hub member in said vertical position  
9 comprise a retaining pin capable of being placed within a  
10 retaining pin slot formed in said pole member.

11 5. An umbrella frame comprising:  
12 a pole member having a longitudinal axis, a bottom end and  
13 a top end,

14 said pole member including a bolt extending from said top  
15 end,

16 a secondary hub member supported on said pole member near  
17 said top end thereof, said secondary hub member including a  
18 central cavity extending axially therethrough, said central  
19 cavity having a first diameter sized to receive at least said  
20 top end of said pole member therein and having a second diameter  
21 sized to receive said bolt therein such that said secondary hub  
22 member is capable of rotating about said longitudinal axis of  
23 said pole member,

24 a main hub member movably secured about said pole member  
25 and capable of sliding between said bottom end and said top end

1 of said pole member and further capable of rotating about said  
2 longitudinal axis of said pole member,

3 a plurality of rib members pivotally secured to said  
4 secondary hub member,

5 a plurality of strut members each having an inner end and  
6 an outer end, said inner ends being pivotally secured to said  
7 main hub member, said outer end of each of said strut members  
8 being pivotally secured to a respective one of said rib members,  
9 and

10 means for maintaining said main hub member in position  
11 along said pole member while permitting rotation of said main  
12 hub member about said longitudinal axis of said pole member.

13 6. The umbrella frame of claim 5 wherein said means for  
14 maintaining said main hub member in said position comprise a cam  
15 cleat member.

16 7. The umbrella frame of claim 5 wherein said means for  
17 maintaining said main hub member in said position comprise a  
18 stabilizer arm having first and second ends, said first end  
19 being secured to one of said strut members and said second end  
20 being operably coupled to said pole member.

21 8. The umbrella frame of claim 5 wherein said means for  
22 maintaining said main hub member in said position comprise a  
23 retaining pin capable of being placed within a retaining pin  
24 slot formed in said pole member.

25 9. An umbrella frame comprising:

1 a pole member having a longitudinal axis, a bottom end and  
2 a top end, wherein at least said top end of said pole member  
3 includes an at least partially hollow interior,

4 an secondary hub member supported on said pole member near  
5 said top end thereof, said secondary hub member including a  
6 central cavity extending axially therethrough sized to receive  
7 at least said top end of said pole member therein,

8 said secondary hub member including a rigid bolt member  
9 extending downwardly and into said at least partially hollow  
10 interior of said pole member such that said secondary hub member  
11 is capable of rotating about said longitudinal axis of said pole  
12 member,

13 a main hub member movably secured about said pole member  
14 and capable of sliding between said bottom end and said top end  
15 of said pole member and further capable of being rotated about  
16 said longitudinal axis of said pole member,

17 a plurality of rib members pivotally secured to said  
18 secondary hub member,

19 a plurality of strut members each having an inner end and  
20 an outer end, said inner ends being pivotally secured to said  
21 main hub member, said outer end of each of said strut members  
22 being pivotally secured to a respective one of said rib members,  
23 and

24 means for maintaining said main hub member in position  
25 along said pole member while permitting rotation of said main

1 hub member about said longitudinal axis of said pole member.

2 10. An umbrella frame, comprising:

3 a pole member having a longitudinal axis and a top end and  
4 a bottom end,

5 a main hub member secured about said pole member, said main  
6 hub member capable of sliding between said bottom end and said  
7 top end,

8 a secondary hub member secured to said pole member near  
9 said top end of said pole member,

10 means for supporting a canopy member,

11 a pulley system for raising and lowering said main hub  
12 member along said pole member, and

13 means for maintaining said main hub member in a vertical  
14 position along said pole member while permitting rotation of  
15 said main hub member about said longitudinal axis of said pole  
16 member.

17 11. The umbrella frame of claim 10 wherein said main hub  
18 member includes a top surface and a bracket member secured to  
19 said top surface of said main hub member, and wherein said  
20 pulley system includes at least one pulley member secured to  
21 said secondary hub member, and further, a line member having a  
22 first end and a second end, said first end being secured to said  
23 bracket member, said line member cooperatively engaging said at  
24 least one pulley member and extending downwardly from said at  
25 least one pulley member towards said bottom end of said pole

1 member.

2 12. The umbrella frame of claim 11 wherein said means for  
3 maintaining said main hub member in said vertical position  
4 includes a cam cleat member secured to an exteriorly exposed  
5 surface of said main hub member and wherein said line member  
6 cooperatively engages said cam cleat member as it extends  
7 downwardly from said at least one pulley member.

8 13. The umbrella frame of claim 12 wherein said cam cleat  
9 member has a rested position and includes a pair of cams  
10 pivotally secured to said exteriorly exposed surface of said  
11 main hub member, said pair of cams each having a toothed side  
12 edge, said toothed side edges facing one another in said rested  
13 position of said cam cleat member.

14 14. The umbrella frame of claim 13 wherein said cam cleat  
15 member further includes a retaining bracket secured to each of  
16 said pair of cams.

17 15. The umbrella frame of claim 11 wherein said secondary  
18 hub member includes a bottom surface and wherein said at least  
19 one pulley member is secured to said bottom surface of said  
20 secondary hub member.

21 16. The umbrella frame of claim 10 wherein said main hub  
22 member and said secondary hub member are rotatable about said  
23 longitudinal axis of said pole member.

24 17. The umbrella frame of claim 10 further including a  
25 hook member secured to an exteriorly exposed surface of said

1 main hub member for hanging said line member.

2 18. An umbrella frame, comprising:

3 a pole member having a longitudinal axis and a top end  
4 and a bottom end,

5 a main hub member secured about said pole member, said  
6 main hub member capable of sliding between said bottom and  
7 said top ends,

8 a secondary hub member secured to said pole member  
9 near said pole top end,

10 means for supporting a canopy member, and

11 a stabilizer arm having a first end and a second end,  
12 said first end being secured to said supporting means, said  
13 stabilizer arm including means for operably coupling said  
14 second end to said pole member.

15 19. The umbrella frame of claim 18 wherein said pole  
16 member includes a stabilizer opening proximate said bottom end  
17 and wherein said means for operably coupling includes a securing  
18 member insertable within said stabilizer opening.

19 20. The umbrella frame of claim 18 wherein said means for  
20 operably coupling includes a locking strap member.